United States Patent [19]

Kalt et al.

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[54] **REFLECTIVE DISPLAY AND METHOD OF MAKING SAME**

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[52] **U.S. Cl.** **340/783;** 340/764

[58] **Field of Search** 350/269; 340/764, 783, 340/763

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[57] **ABSTRACT**

A variable reflectivity display which defines a plane of display (**92**) is disclosed. It comprises a fixed electrode (**16**) which defines a first reflective surface having a first reflectivity. A shield (**20**) defines a second reflective surface having a second reflectivity. The second reflectivity is different from the first reflectivity. A flexible tongue (**18**) having a mirrored surface is supported in a position where one side of the tongue (**18**) is adjacent to the shield (**20**). Means for attracting the tongue to the fixed electrode is provided. The shield and fixed electrode are configured and dimensioned, and supported in a position in facing relationship with respect to each other in such a manner that when the side of the tongue (**16**) opposite the mirrored surface is in abutting relationship to one of the reflective surfaces, that one of the reflective surfaces supports the tongue (**16**) forming the mirrored surface into a shape where light incident upon the element is incident upon the other of the reflective surfaces, or is incident upon the mirrored surface and reflected against the other of the reflective surfaces or reflected from the mirrored surface at an angle with respect to the plane of display (**92**) that is less than (180−A)/2 degrees, where A is the useful angle of view of the display device.

15 Claims, 21 Drawing Figures